

INTEGRATION OF ICT FOR RESEARCH AND ADMINISTRATIVE WORK BY TEACHER EDUCATORS IN SECONDARY STAGE TEACHER EDUCATION INSTITUTES

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Abstract

The study explored the best practices by Teacher Educators in integrating ICT into Research and Administrative work. Understanding teacher educators' use of ICT and its influence is central to determining technology's role and effectiveness during their career. Thus, teacher educators should be assisted and encouraged to develop positive attitudes in learning and to apply ICT in their Profession. The findings showed that both young and experienced teacher educators showed readiness to use ICT in their career.

Keywords: *ICT, Integration, Research, Administration, Teacher Educators, Teacher Education, Professional Development*

Introduction

In the modern scenario of science and technology the Teacher Education evolved by means of ICTs. Different ICTs are now set to become instrumental to help expand access to Teacher education, strengthen the relevance of Teacher education to the increasingly digital work place and raise the professional quality of Teacher Educators. The absence of this understanding has given rise to a gap entitled the second order digital division, a disparity between ICTs access and its usage in Teacher Educators professional development (Anderson, 2018). More in recent times studies have revealed that the majority of Teacher Educators have positive outlooks about the potential of ICT to enhance their professional growth; one of their main concerns was finding time to fully discover this potential (Drent & Meelissen, 2007) besides this, few other findings states that many Teacher Educators has been slow to adopt the use of ICT in their profession. Despite the efforts made to encourage the use of ICT in Teacher education, with few exceptions, student Teachers and Teacher Educators seem generally disinclined to use ICT in their profession (Rizza, 2019). Hence a study is carried out to understand about the role of ICT in the career development of the of Teacher educators. The study also indented to investigate the relationship between ICT use by the faculty members and the level of academic activities. This study will benefit the educational administrators, Teacher educators (In service and Pre service), Teacher and Student Teachers in particular and general.

Integration of ICT for Professional Development of Teacher Educators

Technology should be a tool to help educators meet their continuous professional development need (Panigrahi & Paily, 2016). ICT has a great role on the context of professional development of Teacher Educators. The Teacher Educator should have to learn

how to use ICT not only for teaching and learning but also for their own enrichment in the field. Teacher Educators are the ultimate forces in tapping the new learning opportunities created by the ICT revolution. These educators are instrumental in deciding how teaching and learning shall take place in classrooms, institutions, and the community hence enrichment of ICT skills is very important for them. Integrating ICT in teacher educator career and training can take many reforms. ICT can be an aid for their professional developments. Also there should be joint efforts of service teachers and teacher educators in implementing ICT skills (SMath,2021).

Following are the important wings for the professional development or improvement of Teacher Educator, which will be achieved by integrating ICT in their career.

ICT in Research: Collecting, analyzing, Computing and processing large amount of data through the various available ICT resources like Google Forms, Survey Monkey.com, SPSS, Grammarly, Research Gate etc.

ICT in Administration: Effective use of ICT resources like Google Drive, Gmail, Zoom, MS Office etc. to simplify administrative functions by reducing paper work and replace manual record keeping with digital data management.

Teacher Educators and their Perception towards ICT

Several studies conducted at national and international level have disclosed deficient use of ICT by Teacher Educators. This low use of ICT by teacher educators has resulted in the incompetence of pre service teachers in the aspect of the analysis of the problem, evaluations, anesthetization, solving the problem, and the effective drawing of attainable conclusions about their profession. Regarding these impacts highlighted by different scholars, this study aimed to understand or study teacher educators' perceptions and practices on integrating ICT in their Research and Administration work. With this matter, this study focused on the following line of inquiries.

- What are the teacher educators' perceptions of integrating ICT in their profession?
- How do teacher educators integrate ICT during their research and administrative work?
- What is the impact of ICT in various streams of work area in education?

The study proposed that teacher educators should be optimistic about using new technology in their profession. At the same time, tracking the improvement gained through new technologies can help assess the feedback and the productivity rate. Studies on in service teachers and teacher educators, respectively, found they have a diverse understanding of ICT use in their career, while others expressed discontent on the use of technology. In this regard, the prospective user's perception of whether or not using a particular application system will enhance their performance within an organization is important. Consequently, understanding their perception will determine the nature of the technique to engage and assist in plans to transform their private theories to benefit from ICT use.

Objectives of the Study

The Purpose of this Study is

- To enquire Teacher Educators of Secondary Stage Teacher Education Institutes in Mysuru District. and their experience on the use of ICT to facilitate their professional development.
- To explore the Influence of ICT among Teacher Educators for their professional development in Secondary Stage Teacher Education Institutes in Mysuru District.
- To examine the competencies of Teacher Educators of Secondary Stage Teacher Education Institutes in Mysuru District in using ICT resources.

Population and Sample of the Study

- The population of the study consisted of in service Teacher Educators in B.Ed. colleges of University of Mysore in Mysuru District.
- The sample of the study was selected through a random sampling technique.
- Thirty teacher educators from various teacher education institutions under University of Mysuru in Mysuru District were selected as sample.

Construction of Research Tool

A rating scale was prepared for the data collection. The tools was designed by a detailed analysis of the relevant literature. Several thesis, research journals and e-resources related to integration of ICT in education were referred.

Description of Research Tool

The research tool comprises of three sections. The first section dealt with the personal information of the teacher educators with 10 questions, the second section dealt with the integration of ICT in Teaching, Research and Administration with 40 questions, and The Third section was about the influence of ICT in Teaching, Research and Administration with 30 questions.

Table 1 Research Tool – Response System

Section	Content	Response System	No. of Questions
I	Personal Information	Open ended response	10
II	Integration of ICT	Five Point Rating Scale	10
III	Influence of ICT	Five Point Rating Scale	10

Procedure for Data Collection

The investigator has identified Teacher Educators in Department of Education in B.Ed. colleges under University of Mysore in Mysuru District. The quantitative data were collected for this study using the survey method. The questionnaire was uploaded on a Google Form and a web link was created and circulated among the teacher educators to fill it. The data was obtained via Google sheet and later downloaded as Excel sheet.

Major Findings of the Study

The findings of the study revealed that majority of the teacher educators are not from ICT background and not attended any formal courses related to computers at the same time they equipped themselves by learning computer and internet by own self and through various professional development programs on using technology in education.

The findings show that the majority perceive themselves as capable the ability and skills to use digital technologies for different reasons. The Teacher Educators integrate ICT in research work in a great extent with regards to refer online books/ journals, to write articles/ papers, to refer online thesis/ projects, to check plagiarism, to collect data, and process. At the same time they use very less in checking plagiarism and finding the funding agencies for the research.

The study found that the teacher educators agreed that ICT made the administration more fast and easy, communication and coordination between staff become easier, and it added value to the paperless work.

Major findings of the study reveal that the integration of ICT among the teacher educators is high.

Competency of Teacher Educators in Using ICT

ICT competency is defined as being able to handle a wide range of varying ICT based applications for various purposes. The present study also focuses on the competencies of the faculty members in using ICT.

The data reflects that higher percentage (about 90%) of the faculty members had high competency in ICT. These also result in high level of confidence in using ICT. The qualitative data of the study revealed that faculty members were skilled in internet application which signifies that the teacher educators are highly competent in using internet for searching and sharing information. Furthermore, the faculty members are also competent in basic ICT skills such as word processor, Power Point, Spreadsheet etc. Which assists them in research and administrative work. It is a positive indication that teacher educators are competent in using basic ICT tools. However, they still lack some skills in advanced ICT applications such as in producing info-graphics, Cloud Storage and using AI.

The findings of the present study shows that there is no significant relation between the competency of an individual and the degree/ diploma they have studied. It shows that, irrespective of their stream all teacher educators are highly competent in using ICT for their profession. The teacher educators were skillful in the internet applications which signifies that they are highly competent in using the internet for searching and sharing information. Further more the faculty members were also competent in using basic ICT skill. However they still lack in some advanced ICT skills and applications such as producing info graphics, Artificial Intelligence, Data Analytic etc. The study indicates that the high majority of teacher educators use ICT for 2-4 hours a day for their professional development.

Suggestions by Teacher Educators

During the survey some suggestions from Teacher Educators were also received and recorded regarding ICT integration in their profession. These are listed as follows:

Suggestions for improving integration of ICT in Research by the Teacher Educators.

- Need more webinars related to emerging research field.
- Should make aware about new ICT technology to teachers by conducting weekly session.
- Workshop can be conducted to teach how use ICT in research to teacher educators
- More resources can be available through Internet
- For research purposes first teacher educators need to be aware about applications related to research. Orientation programs by experts can help teacher educators to know about new emerging things in Education.
- Suggestion for improving integration of ICT in Administration work by the Teacher Educators.
- Workshop can be conducted to use ICT apps in administration
- Webinar can be conducted to administrators regarding new emerging technologies
- Training session can be conducted for administrator to make them aware of new ICT technologies
- It will reduce the stress of the administrators
- Every teacher has to give the opportunity to work in administrative field with proper training. (if they are willing)

Recommendation for Further Studies

- A comparative research analysis may be carried out to study the use of ICT by Teacher educators from various universities
- A similar study can be carried out with other private and government institutions.
- Other variables like awareness and attitude towards ICT, ICT anxiety, gender and experience can be studied with similar research objectives.
- A project can be taken to provide training to faculty members for the use and influence of ICT in teaching learning, research and administration.
- A study on ICT usage by university students, school teachers, administrative staff and other faculty members can be carried out.

Conclusion

The study explored the practices of teacher educators on ICT integration in teacher education programs. Specifically, this study intended to understand teacher educators' perceptions and the approaches to integrating ICT in the teaching process and its influence in their professional development. Concerning perceptions, the study has found that irrespective of the age and experience the teacher educators are eager and equipped in

using ICT for their professional development in various streams of education. The study uncovered various approaches to integrating ICT among teacher Educators. Teacher educators use different software, Sometimes, they use social media and subscribe to various academic journals. Moreover, teacher educators assist learners in surfing, searching materials, and evaluating them for reliable and valid information that constitutes their learning.

The findings indicate that updating teacher educators' digital skills is essential. Enhancing digital literacy assures the continuous use of ICT in teaching and learning. The technological revolution has seen many ICT- related programs, software, and applications that require them to be oriented to enhance their literacy and confidence in using them in teaching. The findings show that teacher educators with more years of working experience are also motivated to use ICT. Again, a conducive environment for integrating ICT in teaching requires teacher educators to have a manageable workload and supportive facilities. Adopting modern approaches to integrating ICT into teaching and learning is necessary. This study revealed the use of software and other applications for the field of Teaching, research and administration work.

References

1. Agrawal VK (2021). Foreword: Teacher Education in India. Concerns Challenges and Innovations: Yash Publications.2021
2. Annapurna S Math (2021). Professional Development of Teacher Educator through ICT
3. Selcuk Anderson (2018). Teachers' skills to Integrate technology in education: Education and Information Technologies.
4. Archana Yadav (2016). Significance of ICT in Teacher Education-www.researchgate. net
ArtiSharma (2021). Integration of ICT in 21st Century's Teacher Education Aravind Jaiswal (2011). ICT and Teacher Education
5. Baiju Thomas (2021). The Significant Role of ICTs in Fostering Teacher Education in the 21st Century Educational Systems.
6. Behera & Kumar (2019). Trends in ICT Integrated Teacher Education
7. Bruniges & G havifekr, & Bevernage (2015). Technology related Teaching Skills and Attitudes: Validation of a Scenario based Self-assessment Instrument for Educators
8. Chanhan S.S (2005). ICT enabled Teacher Educators News: NCTE@ ICT initiative of the NCTE Discussion Document, NCTE.
9. National Education Policy (2020). Continuous Professional Development for Teachers.
10. Enochsson & Rizza (2019). The professional development of Teacher Educators Granberg (2011). ICT and learning in Teacher education
11. Jo Shan Fu (2008). ICT in Education: A Critical Literature Review and Its Implications
12. KiranJoshi & Manish Singh (2021). Preface: Teacher Education in India-Concerns Challenges and Innovations.

13. Lalchhanhimi (2015). ICT in elementary teacher education programmes
14. Maddux & Cummings (2014). ICT in Teacher Education: International Journal of Education
15. Rastogi & Malhotra (2010). ICT Skills and Attitude as Determinants of ICT Pedagogy Integration.
16. Marjolein Drent & Martina Meelissen (2007) Which factors obstruct or stimulate teacher educators to use ICT innovatively?: <https://doi.org/10.1016/j.compedu.2007.05.001>; Computers & Education Volume 51, Issue 1, August 2008.
17. Paily M.U (2006). Integration of Information and Communication Technology in Teacher Education-Edutracks.
18. Ayubu Ismail Ngao,Guoyuan Sang,Jimmy Ezekiel Kihwele(2022) Understanding Teacher Educators' Perceptions and Practices about ICT Integration in Teacher Education Program, *Educ. Sci.* 2022, 12(8), 549; <https://doi.org/10.3390/educsci12080549>.